Claims

1. A conjugate comprising (a) an amphiphilic transport peptide of human origin as a transmembrane module (TPU), (b) a nuclear localization sequence (NLS) and (c) a signalling and/or drug carrying module (SM).

2. The conjugate of claim 1, wherein the signalling and/or drug carrying module comprises Gd, Ga, Mn, I, Fe and/or F as (diagnostic) image creating compound.

3. The conjugate of claim 1 or 2, wherein the transmembrane module (TPU) is the human homeobox protein HOX-B1 or a fragment or derivative thereof having substantially the same biological activity.

4. The conjugate of claim 3, wherein the transmembrane module (TPU) comprises the amino acid sequence TQVKIWFQNRRMKQKK.

5. The conjugate according to any one of claims 1 to 4, wherein the nuclear localization sequence (NLS) comprises the amino acid sequence PKKKRKV or KPKRVKK.

6. The conjugate according to any one of claims 1 to 5, wherein the transmembrane module (TPU) is coupled to the nuclear localization sequence (NLS) via a covalently cleavable spacer I and/or the nuclear localization sequence (NLS) is coupled to the signalling and/or drug carrying module (SM) or a compound trapping the signalling and/or drug carrying module (SM) via a non-cleavable spacer II.

7. The conjugate according to claim 6, wherein spacer I comprises a

cleavable disulfide bridge.

8. The conjugate according to claim 7, wherein spacer II is polylysine.

9. The conjugate according to any one of claims 6 to 8, wherein spacer II carries an FITC label.

10. The conjugate according to any one of claims 1 to 9, wherein the conjugate has the following structure: transmembrane module (TPU) - spacer I - nuclear localization sequence (NLS) - spacer II - signalling and/or drug carrying module (SM) or compound trapping the signalling and/or drug carrying module + signalling and/or drug carrying module (SM).

11. The conjugate of any one of claims 1 to 10, wherein said conjugate further comprises a cytotoxic drug.

12. Use of the conjugate of any one of claims 1 to 10 for the preparation of a diagnostic composition for cell tracking.

13. Use of the conjugate of any one of claims 1 to 10 for the preparation of a contrast agent for MRI.

14. Use of the conjugate of any one of claims 1 to 10 for the preparation of a diagnostic composition for determining the activity of DNA repair enzymes.

15. Use of the conjugate of any one of claims 1 to 11 for the preparation of a pharmaceutical composition for the chemotherapeutical treatment of a tumor.

16. Use of the conjugate of any one of claims 1 to 11 for the preparation of a pharmaceutical composition for the intranuclear

GNCT-treatment of a tumor.